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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,860	08/08/2001	Prema Venkatesulu	D2693	2937

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EXAMINER	
MURPHY, RHONDA L	
ART UNIT	**PAPER NUMBER**
2667	

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/924,860	VENKATESULU ET AL.	
	Examiner	Art Unit	
	Rhonda Murphy	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to the Request for Continued Examination (RCE) filed on 12/22/05. Accordingly, claim 26 has been previously canceled and claims 1-25 are currently pending in this application.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6, 10, 12, 17-21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKinnon III et al. (US 2001/0039582).

Regarding claims 1 and 6, McKinnon III teaches a cable network, comprising: a data switching system (Fig. 2, CMTS 30) in communication with a plurality of network elements (Fig. 2, cable modems - CM 34), said data switching system being adapted to issue ranging requests to said network elements from time to time (page 5, paragraph 65: data collector 88 issues queries to the CMs; page 6, paragraph 67: the data collector initiates collection from the CMs occur at thirty minute intervals), determine transmission time delays associated with each of said network elements based on responses to the ranging requests (page 5, paragraph 65: time for which the counter values are returned; page 6, paragraph 68: when the counter values and time thereof

are returned to the data collector, the data collector calculates *the change over time* for each counter value to arrive), and to store responses to the ranging requests in a database (page 6, paragraph 68: stores the information in a user statistics table).

Although McKinnon III fails to explicitly the data switching system (CMTS 30) issuing ranging requests to the network elements (CMs 34), McKinnon III teaches the data collector 88, located within network manager 86, querying the network elements (CMs 34) via the data switching system CMTS (refer to Figure 2).

In view of this, it would have been obvious to one skilled in the art to realize that either the data switching system or network manager is adapted to issue ranging requests to the network elements, since the information is retrieved by way of the data switching system. Hence, the data switching system issues ranging requests to the network elements, via the data collector, which is located within the network manager, as illustrated in Figure 2.

McKinnon III further teaches a management system (Fig. 2, network access manager 86) for managing network elements on the cable network (page 5, paragraph 60), said management system being adapted to obtain network element status information from said database (page 5, paragraph 63; database manager 90 (located within network access manger 86) receives information processed by the data collector),

wherein status information indicating a status of said network elements is determined based on the response by a network element to the ranging request (page 5, paragraph 65: counter values of logical data units are returned for the users. The

status information includes: (i) the number of data units transmitted, (ii) dropped data, and (iii) requested data).

Regarding claims 2 and 25, McKinnon III teaches the management system adapted to manage the data switching system (page 5, paragraph 60; the data collector communicates with each CMTS and CMs for which network access is managed by the network access manager).

Regarding claims 3 and 18, McKinnon III teaches the plurality of network elements being selected from the group consisting of cable modems (Fig. 2, cable modems 34).

Regarding claims 4 and 19, McKinnon III further teaches the plurality of network elements as a plurality of cable modems (Fig. 2, cable modems 34).

Regarding claims 5 and 20, McKinnon III further teaches the data switching system adapted to route data from the cable modem users over a multiplex network interface (page 1, paragraph 5; packets are transmitted by the CMs to the CMTS using time division multiplexing).

Regarding claim 10, McKinnon III further teaches a plurality of data switching systems (CMTS's 30, Fig. 2), each which is in communication with a plurality of endpoint devices (CM's 34) and is adapted to query the endpoint devices from time to time for status information and to store the status information in a database (as described above in the rejection of claim 1).

Regarding claim 12, McKinnon III further teaches the data switching system adapted to query the network elements every 30 minutes (page 6, paragraph 67; the data collector initiates collection from the CMs occur at thirty minute intervals).

Regarding claims 17 and 21, McKinnon III teaches a method of providing a cable network comprising a data switching system (Fig. 2, CMTS 30) in communication with a plurality of network elements (Fig. 2, cable modems - CM 34); providing a management system (Fig. 2, network access manager 86) for managing the network elements on the cable network (page 5, paragraph 60), the management system being in communication with the database (page 5, paragraph 63; Fig. 6; database manager 90, located within network manager 86, receives information processed by the data collector, wherein the database is located within the data collector); providing a ranging request signal from the data switching system to each of the network elements of the plurality of network elements (page 5, paragraph 65: data collector 88 issues queries to the CMTS and CMs), and determining transmission time delays associated with each of said network elements based on responses to the ranging request (page 5, paragraph 65: time for which the counter values are returned; page 6, paragraph 68: when the counter values and time thereof are returned to the data collector, the data collector calculates *the change over time* for each counter value to arrive); determining status information for each of the plurality of network elements based on a response from each of the plurality of network elements to the ranging request, respectively (page 5, paragraph 65: counter values of logical data units are returned for the users); and storing this status information in a database (a database would be inherent in order to store the collected data); and accessing the status information from the database by way of said management system (page 5, paragraph 63; database manager 90 receives information processed by the data collector).

3. Claims 7, 9, 11, 15 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKinnon III et al., in view of Hsieh et al. (US 6,512,824).

Regarding claims 7, 9 and 22, McKinnon teaches a network access manager as an operations system to manage the data switching system/CMTS's and network elements/CMs (page 5, paragraph 60), but fails to disclose the management system as an element management system (EMS) adapted to configure the data switching system.

However, Hsieh teaches an EMS capable of configuring network elements (col. 5, lines 16-18). In view of this, it would have been obvious for the management system to configure the data switching system for the purpose of initializing or changing data within the system.

Regarding claim 11, the same limitations are taught in the rejection of claim 9.

Regarding claim 15, McKinnon teaches the same limitations as described in the rejection of claims 1, 3 and 7. McKinnon teaches a management system in communication with the CMTS, said management system being adapted to obtain status information about the network elements from at least one file (as described in the rejection of claim 1). McKinnon does not disclose the management system as an EMS.

However, Hsieh teaches an EMS. Therefore, it would have been obvious to one having ordinary skill in the art to include an EMS as the management system for the purpose of communicating to the CMTS and cable modem, while retrieving status information about the network elements.

4. Claims 8, 14, 16 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKinnon III, in view of Carlson et al. (US 2004/0210632).

Regarding claims 8, 16 and 23, McKinnon teaches a database and management system that obtains network element status information from said database, as described in the rejection of claim 7 and 15. McKinnon fails to disclose a Lifetest procedure.

However, Carlson discloses a Lifetest procedure described as LTP, which derives state information from network devices (page 1, paragraph 13 and 55-56). In view of this, it would have been obvious to one skilled in the art to include a Lifetest procedure for the purpose of obtaining state information from the network devices.

Regarding claim 14, McKinnon teaches a data switching system, but fails to teach the assignment status selected from up, down or transitional.

However, Carlson teaches the assignment of up, down and unknown operational status (page 1, paragraph 13 and 57). In view of this, it would have been obvious for McKinnon to incorporate Carlson's operation status in order to indicate the state in which the device is operating.

5. Claims 13 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKinnon III et al, in view of Applicant's Admitted Prior Art (AAPA).

Regarding claims 13 and 24, McKinnon teaches a DOCSIS MIB on page 6, paragraph 66. McKinnon fails to explicitly disclose a DOCSIS radio frequency MIB.

However, AAPA teaches, on pages 6-7 of the specification, that DOCSIS requirements specify an RF Management Information Base (MIB). Therefore, it would have been obvious to one having ordinary skill in the art to incorporate a DOCSIS RF MIB into McKinnon's system for the purpose of enabling system vendors to develop a management system to support spectrum management and other operations.

Response to Arguments

Applicant's arguments filed 12/22/05 have been fully considered but they are not persuasive. Applicant argues that McKinnon III does not disclose a ranging request signal from the data switching system to each of the network elements of the plurality of network elements; determining status information for each of the plurality of network elements based on a response from each of the plurality of network elements to the ranging request signal. Examiner respectfully disagrees and would like to direct the applicant's attention to the cited pages, paragraphs and comments listed above in the rejection of claims 1, 15 and 17. McKinnon teaches all claimed limitations, including the amended limitations: determining transmission time delays associated with network elements based on responses to the ranging requests (page 5, paragraph 65: time for which the counter values are returned; page 6, paragraph 68: when the counter values and time thereof are returned to the data collector, the data collector calculates *the change over time* for each counter value to arrive); and status information indicating a status of said network elements (page 5, paragraph 65: counter values of logical data units are returned for the users. The status information includes: (i) the number of data units transmitted, (ii) dropped data, and (iii) requested data).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rhonda Murphy whose telephone number is (571) 272-3185. The examiner can normally be reached on Monday - Friday 8:00 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rhonda Murphy
Examiner
Art Unit 2667

RM

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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

2/6/06